

Notice of Allowability

Application No.

10/525,771

Examiner

Patricia C. Mallari

Applicant(s)

KIM, YOU-IN

Art Unit

3735

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/1/06.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


CHARLES A. MARMOR II
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

US Patent No. 5,873,834 to Yanagi teaches a method and apparatus for measuring and displaying a blood pressure of a subject in a non-invasive manner, wherein the blood pressure measuring instrument comprises a sensor 27 for obtaining a pulse wave signal from a wrist of a subject, a pulse wave signal processing section 28, 29 for amplifying, filtering, and removing noise from the obtained pulse wave signal to obtain a processed analog pulse wave signal, ECG electrodes 21, 22 for detecting an ECG signal of the subject, and an ECG signal processing section 23-25 for amplifying, filtering and removing noise from the detected ECG signal to obtain a processed analog ECG signal. An A/D converting section 26, converts the processed analog pulse wave signal and the processed analog ECG signal into a digital pulse wave signal and a digital ECG signal. A controlling section 31 compares and analyzes the digital pulse wave signal and digital ECG a transition time parameter and determines the blood pressure of the subject based on the transition time parameter (see entire document, especially fig. 1; col. 2, lines 36-col. 3, line 9; col. 3, line 66-col. 5, line 32 of Yanagi). Yanagi uses a photoelectric pulse wave sensor rather than a pressure sensor to detect the pulse wave and the controlling section determining an area parameter, and integral parameter, and a maximum amplitude parameter and determining blood pressure based on those parameters, as claimed.

US Patent No. 5,735,799 to Baba et al. teaches an automatic blood pressure measuring instrument comprising a pulse wave sensor, wherein the pulse wave sensor

may be a pressure sensor or a photosensor (see entire document, especially col. 3, lines 60-63 of Baba). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a pressure sensor in place of the photoelectric pulse wave sensor of Yanagi, since Baba shows the photosensor and pressure sensor to be functionally equivalent means for detecting a pulse wave in a blood pressure measuring instrument. However, the combination of Yanagi and Baba still lacks the controlling section determining an area parameter, integral parameter, and maximum parameter and determining blood pressure based on those parameters, as claimed.

US Patent Application Publication No. 20030125631 to Amano teaches obtaining mean blood pressure based on the determination of an integral parameter (see entire document, especially paragraph 31 of Amano). US Patent Application Publication No. 2002/0095092 to Kondo et al. teaches a using an area parameter to determine the blood pressure is determined therefrom (see entire document, especially paragraphs 61-72 of Kondo). US Patent No. 4,754,406 to Miyawaki teaches using a maximum amplitude parameter to determining blood pressure (see entire document, especially col. 7, lines 51-66 of Miyawaki). There is no suggestion to combine Amano, Kondo, or Miyawaki with Yanagi, as modified, or with each other.

Accordingly, the prior art of record fails to teach or fairly suggest a method or instrument for measuring and displaying blood pressure in a non-invasive manner, wherein a controlling section compares and analyzes the digital pulse wave signal and the digital electrocardiogram signal to determine parameters comprising a transition time parameter, an integral parameter, an area parameter, and a maximum amplitude

parameter, and determines the blood pressure of the subject based on the transition time parameter, the integral parameter, the area parameter, and the maximum amplitude parameter, in combination with all of the other limitations of the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (571) 272-4729. The examiner can normally be reached on Monday-Friday 10:00 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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